

REMARKS/ARGUMENTS

Before discussing the issues raised by the examiner in the office action, applicant first wishes to thank the examiner for the courtesy extended to the below signed attorney during the interview on February 19, 2004. The following comments constitute a separate record of the substance of the interview as well as additional comments in support of the patentability of the claimed invention.

The examiner indicated during the interview that claim 1 can be placed in condition for allowance by incorporating the limitations of claim 2 therein. Accordingly, claim 1 has been amended in this manner. Thus, it is clear that claim 1 as well as the claims which depend therefrom are now in condition for allowance. In this regard it is to be noted that Independent claim 11 has been amended so that it is now dependent on claim 1. Thus, claim 11 is also in condition for allowance. It is also to be noted that a couple of phrases which appear in claim 11 have been deleted since these phrases appear in claim 1 from which claim 11 depends and are therefore no longer necessary in claim 11.

The amendment to claim 11 as discussed above, results in claim 12 (originally numbered as claim 13) being superfluous and has therefore been cancelled.

The examiner has rejected claims 1, 2, 4-11 and 13 under 35 U.S.C. §103(a) as being unpatentable over Shneernov and Cary. In rejecting the claims the examiner acknowledges that the exact elastic limit ratios are not taught by the cited references. In this regard the examiner states:

The exact elastic limit ratios are not taught, but the prior art ratios overlap and encompass instant claim ratios.

The examiner has also rejected claim 12 under 35 U.S.C. § 103(a) as being unpatentable over the same cited references. In rejecting claim 12 the examiner once again refers to the overlapping ranges cited by the prior art. In particular, the examiner notes that the claimed compositions would be obvious "because of the similarity in the properties and overlapping ranges".

Applicant submits that the claimed invention is patentably distinguished over the cited references for the reasons discussed below.

It is well settled in patent law that in determining the difference between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention **as a whole** would have been obvious (see MPEP § 2141.02). In view of the above it is clear that the subject matter as a whole must be considered in determining the obviousness of an invention under 35 U.S.C. § 103. In this regard MPEP § 2141.02 states in part:

[A] patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the 'subject matter as a whole' which should always be considered in determining the obviousness of an invention under 35 U.S.C. § 103.

It is clear from applicant's specification that prior to applicant's invention, it was never realized that poor feeding performance which results in unacceptable arc stability is caused by specific mechanical properties of the wire. In particular, applicant notes in the specification that after studying the coil properties of the wire it was discovered that when the coil properties are in a specific predetermined range, good arc stability is achieved. Thus, the present invention has been achieved by the discovery of the problem which produces poor feeding and hence unacceptable arc stability and the solution to the problem which involves obtaining good stability by carefully controlling the elastic limit ratio to a specified selected value. In this regard the examiner's attention is directed to the first two paragraphs under the detailed description of preferred embodiments on pages 3-4 of the specification.

It is clear from applicant's discussion under the heading "Description of the Related Art" that the prior art approach to improving arc stability relate to the surface characteristics of the wire and the approach was therefore limited to altering the properties and conditions of the wire surface. In this regard it is noted on page 1, lines 34-35 that "The prior art described above relate to properties and conditions of a wire surface".

In view of the above, it is clear that applicant was the first to discover that the problem of poor arc stability is caused by the elastic limit ratios of the wire and that once it is known that the elastic limit ratios caused this problem, applicant has been able to develop a solution to this problem by controlling the elastic limit ratios so that they lie in a specific range which leads to acceptable arc stability. In particular, applicant has discovered that controlling or selecting the elastic limit ratio so that it is in the range of 50 to 88%, results in acceptable arc stability.

It is clear that the examiner has not evaluated the invention as a whole and, in particular, has not considered the fact that applicant has discovered the source of a problem as well as the solution to the problem. Thus, while it may be obvious to construct a wire having the elastic limit ratios required by applicant's invention once it has been pointed out that elastic limit ratios are the source of the problem, it was applicant who discovered the source of the problem and thus it would not be obvious to select the elastic limit ratios which applicant has discovered as a cure for this particular problem.

In view of the above, it is clear that the examiner has not established a *prima facie* case of obviousness since the invention as a whole, including applicant's discovery of the source of the problem, has not been properly considered. Furthermore, even if the examiner has established a *prima facie* case of obviousness, applicant has established by the comparative data in the specification that selecting the specific range of 50-88% for the elastic limit ratio results in enhanced arc stability. In this regard the examiner's attention is directed to the comparative testing, the results of which are summarized in table 1 on page 8 of the specification. It is to be noted that the wires in table 1 which have an elastic limit ratio within the claimed range (i.e., 50-88%) have improved arc welding stability as evidenced by the lack of slag inclusion and the lack of meandering beads which results in a decrease of current on welding and a decrease in the number of spatters so that a good welding bead can be achieved.

This comparative data must be evaluated in accessing the obviousness of the invention. In this regard applicant wishes to remind the examiner that comparative evidence in the specification must be considered in evaluating a rebuttal of *prima facie* obviousness *in re Margolis* 228 U.S.P.Q. 940 and

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comparative examples set forth in the specification overcome any presumption of obviousness *ex parte Drewe et al.* 203 U.S.P.Q. 1127. .

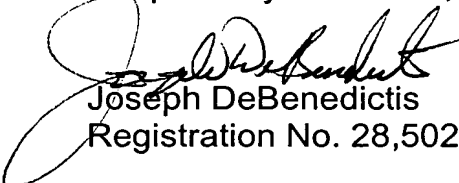
In view of the above arguments, the agreement reached with the examiner during the interview and the present amendment to the claims, applicant respectfully requests reconsideration and allowance of all the claims which are currently pending in the application.

Date: March 9, 2004

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Respectfully submitted,



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